

CLAIMS

What is claimed is:

1. A unit electrically connected to, and selectively removable from, a complementary unit for controlling the operating functions of a cycle, so that said electrical connection can be decoupled by leaving exposed at least one distal contact part both of said units wherein the electrical connection is at least one switch that can be selectively actuated for electrically insulating said exposed distal contact part from either of said units.

2. The unit of claim 1 wherein the operation of said switch is dependent upon the proximity of said complementary unit to said unit.

3. The unit of claim 1 wherein said switch electrically connects said unit to said distal contact part when said unit and said complementary unit are near to one another.

4. The unit of claim 1 wherein said electrical connection is a multiwire electrical connection that can be decoupled by leaving exposed a plurality of distal contact parts on said unit, and in that associated to said electrical connection is a plurality of switches that can be selectively operated when said unit and said at least one complementary unit are moved away from one another, and wherein when said unit and complementary unit are moved away from one another, the exposed distal contact parts are electrically insulating from said unit.

5. The unit of claim 4 wherein at least one line of said multiwire electrical connection extends with continuity towards the respective distal part in absence of said switch.

6. The unit of claim 1 wherein said electrical connection is inserted in at least one bus.

7. The unit of claim 5 wherein said line, which extends with continuity, is a ground line of said at least one bus.

8. The unit of claim 1 wherein said switch is a reed switch that can be operated by a magnet.

9. The unit of claim 1 wherein said switch is mounted in a position such that, with said unit and said complementary unit co-operating together, the switch is in proximity with complementary unit so that the proximity operates by an actuation element that is placed on said complementary unit.

10. The unit of claim 1 wherein the unit is configured for stable installation on said cycle.

11. The unit of claim 1 further comprising at least one actuation element for operating at least one switch present in said complementary unit.

12. The unit of claim 11 wherein said actuation element is positioned so as to interact with a corresponding actuation element present in said complementary unit.

13. A complementary unit for controlling the operating functions of a cycle, designed for co-operating with at least one unit comprising:

at least one actuation element for a switch that can be selectively actuated for electrically insulating said exposed distal contact part from either or one of said units.

14. The complementary unit of claim 13 wherein the actuation element is a magnet.

15. The complementary unit of claim 13 wherein the complementary unit is selectively removable from said cycle.

16. The complementary unit of claim 13 wherein the complementary unit is configured as a display unit that visually communicates with a user.

17. The complementary unit of claim 13 wherein the switch can be selectively actuated for electrically insulating said exposed distal contact part of said units.

18. A control unit for controlling the operating functions of a cycle, the control unit being removably connected to a display unit that communicates with a user, the control unit removably electrically connected to the display unit through control unit contacts and display unit contacts, wherein removal of the display unit from the control unit disconnects the electrical connection and insulates the control unit contacts.

19. The control unit of claim 18 further comprising a magnet in the display unit that closes a magnetic switch in the control unit when the magnet is in proximity to the control unit, wherein when the magnetic switch is open, the contacts are insulated, and when the magnetic switch is closed, the contacts are exposed.

20. The control unit of claim 19 further comprising a magnet in the control unit that closes a magnetic switch in the display unit when the magnet is in proximity to the display unit, wherein when the magnetic switch is open, the display unit contacts are insulated, and when the magnetic switch is closed, the display unit contacts are exposed.

21. The control unit of claim 19 wherein the magnetic switch is a reed switch.
22. The control unit of claim 19 wherein the operating functions of the cycle includes operating an actuator.
23. The control unit of claim 22 wherein the actuator operates a derailleur on the cycle.
24. A control unit for controlling the operating functions of a cycle comprising a display unit that closes a switch in the control unit and when the display unit is in a proximity to the control unit, and when the switch is closed, the contacts are exposed, and when the display unit is outside of the proximity of the control unit, the switch is open and the contacts are insulated.
25. The control unit of claim 24 wherein the switch is selected from the group consisting of: reed-bulb switches, magnetic switches, mobile-element relays, Hall-effect-sensor relays switches, optical signal switches, and radio-frequency signal switches.
26. A system for controlling the operating functions of a cycle, the system comprising:
 - at least one display unit that provides information regarding the functional operation of a cycle in human readable form;
 - at least one control unit which is capable of a functional connection with and an exchange of operational information with the at least one display unit regarding the cycle's locomotion functions; and
 - a connection between the display and control units that is comprised of a switch that is selectively operable between opened and closed positions in a one of the units

and a switch control for selectively operating the switch between the opened and closed positions in the other of the units,

whereby the units may be selectively electrically connected together or insulated from each other.